Name and brief description of initiative:
NSF-NIH Collaborative Research in Computational Neuroscience (CRCNS)

Brief description of goals of initiative:
The CRCNS is a joint program supported by five NSF Directorates, nine NIH Institutes, and other Federal agencies on an informal basis. The goal of this initiative is to support innovative interdisciplinary collaborative research, which integrates computational theory and methods with experimental neuroscience. The emphasis is on innovative collaborations among computer scientists, engineers, mathematicians, statisticians, theoreticians and experimental neurobiologists. The research must impact on, and be related to, biological processes and generate hypotheses that are testable in biological studies.

Principal investigator:
Over 70 individual awards have been made to date

Program contact information:
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Website address of initiative:
http://www.nsf.gov/crcns/
http://grants.nih.gov/grants/guide/notice-files/NOT-NS-04-003.html

Brief description of biomedical informatics and computational biology components and their goals:
- Creating biologically realistic computational models of neural structure, function, process and mechanisms underlying normal and diseased states of the nervous system – from genetic, molecular, subcellular, cellular, network, systems to behavior and diseases.

- Developing mathematical, statistical, and computational tools and methods to analyze complex, high-dimensional, and dynamic neuroscience data.

For research supported under the CRCNS, please see:
http://www.nsf.gov/cise/funding/crcns_awards_all.jsp

Brief description of resources and tools available for sharing:
Sharing of data, algorithms, and other resources is an issue of critical importance to this research community, which depends on collaboration and exchange of data and methods to develop accurate functional models and to empirically test new theories. This issue has been discussed at the past two Annual CRCNS PI meetings and more extensively at a workshop held in conjunction to the 2006 PI meeting. The CRCNS is supporting exploratory activities to get community input on infrastructure and practices to facilitate sharing.

Interactions with other initiatives:
Some of the CRCNS principal investigators and collaborators have also been funded under other interagency or trans-NIH bioinformatics initiatives, such as the Biomedical Informatics Research Network (BIRN), the Human Brain Project (HBP) and the Neuroscience Information Framework. A CRCNS representative participated in the 2006 NIH Neuroscience Blueprint Workshop "Link Informatics of Neuroscience Communities".

Opportunities for collaboration or synergy with the NCBCs:
Some of the investigators funded under the CRCNS have established informal collaborations with the NCBCs.

Prepared by Y. Liu, K. Whang and D. Glanzman 6/30/06